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(54) COMBINING POWER SUPPLY ELEMENT OF NON-AQUEOUS ELECTROLYTE SOLUTION PRIMARY BATTERY AND ELECTRIC DUBLE-LAYER CAPACITOR

(57) Abstract:

PROBLEM TO BE SOLVED: To improve heavy load discharging characteristic of a non-aqueous electrolyte solution primary battery, by connecting and integrating in parallel a non-aqueous electrolyte solution primary battery with an electric double-layer capacitor, and then providing two terminals of positive pole and negative pole as in the case of an ordinary battery.

SOLUTION: A side wall section and a bottom section of a battery case la of a cylindrical non-aqueous electrolyte solution primary battery 1 are defined as a negative terminal, and a positive terminal 1b is provided via an insulating layer consisting of glass or the to a battery cover welded to the aperture end section of a battery case 1a. At the bottom section of the battery case 1a of the non-aqueous electrolyte solution primary battery 1, an electric double-layer capacitor 2 using a couple of button type elements is provided under the condition that these elements are connected with a lead wire. As a result, deterioration of heavy load discharging characteristic of the non-aqueous electrolyte solution primary battery 1 is compensated by the excellent quick charging/discharging characteristic of the electric double-layer capacitor 2 in order to improve heavy load discharging characteristic.